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EVALUATION OF THE DIFFERENCES IN PEST MANAGEMENT FOR CONVENTIONAL AND TRANSGENIC COTTON

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Abstract

In order to evaluate the differences in pest management for transgenic cotton - with the *cry1Ac* gene, such as NuOpal and DP 604 B (both resistant to the Cotton Blue Disease, CBD) - and conventional one, such as DeltaOpal, FM 910 (both resistant to the CBD) and FM 977 (susceptible to the CBD), a comparison was drawn by Ceres Consultoria Agronômica, CIRAD and the São José farm, 29 km away from Primavera do Leste – Mato Grosso, subsidized by FACUAL's fund. Planting was done on December 22, 2007. These varieties were laid out on a production field totaling 57 ha, composed of 18 ha (NuOpal), 0,4 ha (DP 604 B), 4ha (DeltaOpal), 3 ha (FM 910) and 32 ha (FM 977). Pest control was done following threshold levels, through the monitoring of insects and mites over 80 plants twice a week. Beginning at 95 days after emergence, 400 green bolls were analyzed per cultivar. Data related to chemical applications were collected. The most relevant pests on both cultivars were *Aphis gossypii* aphid, followed by *Pseudoplusia includens* caterpillars, *Tetranychus urticae* mites, *Euschistus heros* pentatomid bug, *Spodoptera eridania* and *Spodoptera frugiperda* caterpillars. The occurrence of these non-target pests did not create differences on the applications among the different cultivars. *Heliothis virescens* and *Alabama argillacea* caterpillars were observed on the conventional cultivars. Results obtained on the managements verify the efficiency of the toxin on these target pests. There was no need to apply the insecticides Avaunt 150, Tracer and Mentox 600 EC on the transgenic cottons, resulting in the economy of three applications. In total, the transgenic cotton was protected by eighteen different products, while the conventional cotton received twenty different products.

Keywords: *Pest management, NuOpal, DeltaOpal, transgenic cotton.*